AMENDMENTS TO THE CLAIMS

The listing of claims below replaces all prior versions of claims in the application.

1. (Currently Amended) A DC-DC converter comprising:

a transformer having primary side terminals, secondary side terminals, a primary side winding, and a secondary side winding ~~and determining a voltage converting ratio~~;

a pair of switching means ~~which is~~ interposed between said primary side terminals and said primary side winding[[,]];

a LC resonant circuit comprised of a resonating reactor connected in series with said secondary side winding of said transformer, and a resonating capacitor that resonates with said resonating reactor; [[and]]

a driving means for alternately turning said pair of switching means ON/OFF[[,]]; ~~wherein:~~

a resonant current detecting means for detecting a value per half cycle of a resonant current caused by an operation of said LC resonant circuit; and

[[means]] a current value comparing unit comparing the detected per-half cycle resonant current value to a threshold value and ~~for feeding a detected output of said resonant current detecting means back~~ feeding the comparison result to said driving means ~~are provided;~~, wherein [[and]]

said driving means drives said pair of switching means by correcting their on-state lapses of time so that their on-state resonant currents may be nearly equal to each other based on the

~~detected output~~ comparison result of said current value comparing unit ~~of said resonant current detecting means~~.

2. (Original) The DC-DC converter according to claim 1, wherein said resonant current detecting means is provided on the primary side of said transformer.

3. (Currently Amended) A bi-directional DC-DC converter comprising:

a transformer having low-voltage side terminals, high-voltage side terminals, a low-voltage side winding, and a high-voltage side winding ~~and determining a voltage converting ratio~~;

a low-voltage side pair of switching means interposed between said low-voltage side terminals and said low-voltage side winding;

a high-voltage side pair of switching means interposed between said high-voltage side terminals and said high-voltage side winding;

a low-voltage side rectifying element connected in parallel with each of switching elements in said low-voltage side pair of switching means;

a high-voltage side rectifying element connected in parallel with each of switching elements in said high-voltage side pair of switching means; [[and]]

a driving means for turning ON/OFF the switching elements in said low-voltage side pair of switching means and the switching elements in said high-voltage side pair of switching means;~~, wherein:~~

a LC resonant circuit [[is]] interposed between said high-voltage side winding and said high-voltage side pair of switching means;

a resonant current detecting means [[for]] detecting a value per half cycle of a resonant current caused by an operation of said LC resonant circuit; and

[[means]] a current value comparing unit comparing the detected per half cycle of a threshold value and ~~for feeding a detected output of said resonant current detecting means back~~ feeding the comparison result to said driving means, wherein ~~are provided; and~~

said driving means drives said low-voltage side pair of switching means or said high-voltage side pair of switching means by correcting their on-state lapses of time so that their on-state resonant currents may be nearly equal to each other based on the ~~detected output~~ comparison result of said current value comparing unit ~~of said resonant current detecting means~~.

4. (Canceled)

5. (Original) The DC-DC converter according to claim 3, wherein said low-voltage side pair of switching means and said high-voltage pair of switching means are each configured by interconnecting four switching elements in a bridge.